

## Title (en)

Direct fuel injection combustion control system

## Title (de)

Regelsystem für die Direkteinspritzung des Kraftstoffs

## Title (fr)

Système de commande pour l'injection directe de carburant

## Publication

**EP 1443197 A3 20061025 (EN)**

## Application

**EP 04001380 A 20040122**

## Priority

JP 2003023317 A 20030131

## Abstract (en)

[origin: EP1443197A2] A direct fuel injection combustion control system controls combustion in a direct fuel injection spark ignition engine that maintains a constant pressure in an accumulator when fuel is not being injected. The combustion control system controls combustion when fuel injection is resumed after being temporarily stopped. The combustion control system has a target fuel pressure acquiring section (step S14, S34, S54, S74, S94, S114), an actual fuel pressure detecting section (step S15, S35, S55, S75, S95, S115), a timing acquiring section (steps S17 and S18), and a first timing control section (step S16, S36, S56, S76, S96, S116). The target fuel pressure acquiring section (step S14, S34, S54, S74, S94, S114) acquires a target fuel pressure based on an engine rotational speed N2 and an engine load T2. The actual fuel pressure detecting section (step S15, S35, S55, S75, S95, S115) detects the actual fuel pressure (7 MPa). The timing acquiring section (steps S 17 and S18) acquires the fuel injection timing and ignition timing (50 and 30 degrees BTDC) based on the rotational speed N2 and load T2. The first timing control section (step S16, S36, S56, S76, S96, S116) controls the fuel injection timing and the ignition timing based on actual fuel pressure. The first timing control section (step S16, S36, S56, S76, S96, S116) controls the fuel injection timing and the ignition timing based on actual fuel pressure, e.g., retards the fuel injection timing and the ignition timing to 40 and 25 degrees BTDC.

## IPC 8 full level

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## CPC (source: EP US)

**F02D 37/02** (2013.01 - EP US); **F02D 41/126** (2013.01 - EP US); **F02D 41/401** (2013.01 - EP US); **F02D 41/3836** (2013.01 - EP US); **Y02T 10/40** (2013.01 - EP US)

## Citation (search report)

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- [A] US 5694902 A 19971209 - MIWA MAKOTO [JP], et al
- [A] EP 0899443 A2 19990303 - ISUZU MOTORS LTD [JP]
- [A] EP 1201901 A2 20020502 - TOYOTA MOTOR CO LTD [JP]
- [DA] PATENT ABSTRACTS OF JAPAN vol. 2000, no. 04 31 August 2000 (2000-08-31)
- [A] PATENT ABSTRACTS OF JAPAN vol. 2002, no. 12 12 December 2002 (2002-12-12)
- [A] PATENT ABSTRACTS OF JAPAN vol. 017, no. 068 (M - 1365) 10 February 1993 (1993-02-10)

## Cited by

EP1741913A3; WO2006111438A1

## Designated contracting state (EPC)

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## Designated extension state (EPC)

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## DOCDB simple family (application)

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